

CLAIMS

Having thus described the invention, at least the following is claimed:

- 1 1. A fire-blocking fabric comprising:
2 a nonwoven scrim; and
3 a plurality of flame resistant fibers entangled to and with the nonwoven scrim.

- 1 2. The fabric of claim 1, wherein the nonwoven scrim comprises at least one of
2 aramid fibers, polybenzimidazole fibers, and melamine fibers.

- 1 3. The fabric of claim 1, wherein the nonwoven scrim comprises para-aramid and
2 meta-aramid fibers in a ratio of approximately 65 para-aramid fiber to 35 meta-aramid
3 fiber.

- 1 4. The fabric of claim 1, wherein the flame resistant fibers comprise at least one of
2 aramid fibers, polybenzimidazole fibers, and melamine fibers.

- 1 5. The fabric of claim 1, wherein the scrim has a weight of approximately one-half to
2 approximately four ounces per square yard.

- 1 6. The fabric of claim 1, wherein the fabric has a weight of approximately 4 to
2 approximately 9 ounces per square yard.

- 1 7. The fabric of claim 1, whereby the flame resistant fibers are entangled to and with
2 the nonwoven scrim by needlepunching.

- 1 8. The fabric of claim 1, whereby the flame resistant fibers are hydroentangled to
2 and with the nonwoven scrim.
- 1 9. The fabric of claim 1, whereby the flame resistant fibers are chemically bonded to
2 and with the nonwoven scrim.
- 1 10. The fabric of claim 1, wherein the scrim comprises approximately 11 percent to
2 approximately 60 percent of the fabric by weight.
- 1 11. The fabric of claim 1, wherein the scrim has a thickness of approximately 0.001 to
2 approximately 0.07 inches.
- 1 12. The fabric of claim 1, wherein the flame resistant fibers have a thickness of
2 approximately 0.031 to approximately 0.128 inches.
- 1 13. The fabric of claim 1, wherein the fabric satisfies FAA seat burn requirements.
- 1 14. The fabric of claim 1, wherein the fabric has a tensile strength of greater than
2 approximately 25 pounds in the machine direction and greater than approximately 30
3 pounds in the cross-machine direction.

- 1 15. A fire-blocking fabric comprising:
2 a nonwoven scrim comprising approximately 50% melamine fibers,
3 approximately 25% para-aramid fibers, and approximately 25% meta-aramid fibers; and
4 a plurality of flame resistant fibers that are entangled to and with the nonwoven
5 scrim, the fibers including at least one of aramid fibers, polybenzimidazole fibers, and
6 melamine fibers.
- 1 16. The fabric of claim 15, wherein the fabric satisfies FAA seat burn requirements.
- 1 17. The fabric of claim 15, wherein the fabric has a tensile strength of greater than
2 approximately 25 pounds in the machine direction and greater than approximately 30
3 pounds in the cross-machine direction.
- 1 18. The fabric of claim 15, wherein the scrim has a weight of approximately one-half
2 to approximately four ounces per square yard.
- 1 19. The fabric of claim 15, wherein the fabric has a weight of approximately 4 to
2 approximately 9 ounces per square yard.
- 1 20. The fabric of claim 15, whereby the flame resistant fibers are entangled to and
2 with the nonwoven scrim by needlepunching.

1 21. The fabric of claim 15, whereby the flame resistant fibers are chemically bonded
2 to the nonwoven scrim.

1 22. The fabric of claim 15, whereby the flame resistant fibers are hydroentangled with
2 the nonwoven scrim.

1 23. The fabric of claim 15, wherein the scrim comprises approximately 11 percent to
2 approximately 60 percent of the fabric by weight.

1 24. The fabric of claim 15, wherein the scrim has a thickness of approximately 0.001
2 to approximately 0.07 inches.

1 25. The fabric of claim 15, wherein the flame resistant fibers have a thickness of
2 approximately 0.031 to approximately 0.128 inches.

- 1 26. A fire-blocking fabric comprising:
- 2 a nonwoven scrim comprising approximately 0-95% by weight melamine fibers,
- 3 approximately 0-95% by weight para-aramid fibers, approximately 0-95% by weight
- 4 meta-aramid fibers, and approximately 0-95% by weight polybenzimidazole fibers; and
- 5 a plurality of flame resistant fibers that are entangled to and with the nonwoven
- 6 scrim, the fibers including at least one of aramid fibers, polybenzimidazole fibers, and
- 7 melamine fibers.

- 1 27. An aircraft seat, comprising:
2 a frame;
3 a cushion;
4 a fire-blocking fabric comprising
5 a nonwoven scrim, and
6 a plurality of flame resistant fibers entangled to and with the nonwoven
7 scrim; and
8 a dress cover.
- 1 28. The seat of claim 27, wherein the nonwoven scrim comprises aramid fibers,
2 polybenzimidazole fibers, and melamine fibers.
- 1 29. The seat of claim 27, wherein the nonwoven scrim comprises para-aramid and
2 meta-aramid fibers in a ratio of approximately 65 para-aramid fibers to approximately 35
3 meta-aramid fiber.
- 1 30. The seat of claim 27, wherein the flame resistant fibers comprise at least one of
2 aramid fibers, polybenzimidazole fibers, and melamine fibers.
- 1 31. The seat of claim 27, where the scrim has a weight of approximately one-half to
2 approximately four ounces per square yard.
- 1 32. The seat of claim 27, wherein the fire-blocking fabric has a weight of
2 approximately 4 to approximately 9 ounces per square yard.

1 33. The seat of claim 27, whereby the flame resistant fibers are entangled to and with
2 the nonwoven scrim by needlepunching.

1 34. The seat of claim 27, whereby the flame resistant fibers are hydroentangled to and
2 with the nonwoven scrim.

1 35. The seat of claim 27, whereby the flame resistant fibers are chemically bonded to
2 and with the nonwoven scrim.

1 36. The seat of claim 27, wherein the scrim comprises approximately 11 percent to
2 approximately 60 percent by weight of the fire-blocking fabric.

1 37. The seat of claim 27, wherein the scrim has a thickness of approximately 0.001 to
2 approximately 0.07 inches.

1 38. The seat of claim 27, wherein the fibers have a thickness of approximately 0.031
2 to approximately 0.128 inches.

1 39. The seat of claim 27, wherein the fire-blocking fabric satisfies FAA seat burn
2 requirements.

- 1 40. The seat of claim 27, wherein the fabric has a tensile strength of greater than
- 2 approximately 25 pounds in the machine direction and greater than approximately 30
- 3 pounds in the cross-machine direction.

TKHR Docket No. 011920-1380

1 41. A method for constructing a fire-blocking fabric for use in an aircraft seat
2 comprising the steps of:

3 laying a web of flame resistant fibers on a nonwoven scrim; and
4 entangling the fibers to and with the nonwoven scrim.

1 42. The method of claim 41, wherein the scrim comprises at least one of aramid
2 fibers, polybenzimidazole fibers, and melamine fibers.

1 43. The method of claim 41, wherein the flame resistant fibers comprise at least one
2 of aramid fibers, polybenzimidazole fibers, and melamine fibers.

1 44. The method of claim 41, wherein the step of entangling the fibers to and with the
2 nonwoven scrim comprises needlepunching the fibers and nonwoven scrim.

1 45. The method of claim 41, wherein the step of entangling the fibers to and with the
2 nonwoven scrim comprises hydroentangling the fibers and nonwoven scrim.

1 46. The method of claim 41, wherein the step of entangling the fibers to and with the
2 nonwoven scrim comprises chemically bonding the flame resistant fibers to the
3 nonwoven scrim

1 47. The method of claim 41, wherein the step of entangling the fibers to and with the
2 nonwoven scrim comprises chemically entangling the fibers and nonwoven scrim.

- 1 48. The method of claim 41, wherein a fire-blocking fabric satisfies FAA seat burn
- 2 requirements.

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